

REMARKS

In the Office Action¹, the Examiner rejected claim 30 under 35 U.S.C. § 112, first paragraph; rejected claims 30 and 32-34 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,535,364 to Resman et al. ("*Resman*") in view of U.S. Patent No. 5,675,790 to Walls ("*Walls*"); allowed claims 23-26; and objected to claim 31 as being dependent upon a rejected base claim, but allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 17-34 are pending, and claims 17-22 and 27-29 have been withdrawn.

I. Regarding the rejection of claim 30 under 35 U.S.C. § 112, first paragraph

Regarding the rejection of claim 30 under 35 U.S.C. § 112, first paragraph, the Examiner states, "[a]fter thorough analysis, the Examiner can not find clear support in the original disclosure matching the scope of the negative limitation, 'without accessing an operating system'" (Office Action at page 3). Applicant respectfully disagrees. The following excerpt from Applicant's specification is an example of a teaching which renders the claim in full compliance with 35 U.S.C. § 112, first paragraph.

"Distributing shared memory resources in a manner consistent with the principles of the present invention does not require accessing the operating system, a costly and time consuming event, to distribute shared memory among threads" (Specification at page 14, lines 7-9).

¹ The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicant declines to automatically subscribe to any statement or characterization in the Office Action.

Applicant submits that this passage, among others, enables the claimed limitations. Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 30 under 35 U.S.C. § 112, first paragraph.

**II. Regarding the rejection of claims 30 and 32-34 under
35 U.S.C. § 103(a) as being unpatentable over *Resman* in view of
*Walls***

Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claims 30 and 32-34 because a *prima facie* case of obviousness has not been established with respect to these claims.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). M.P.E.P. § 2142, 8th Ed., Rev. 2 (May 2004), p. 2100-128.

A *prima facie* case of obviousness has not been established because, among other things, neither *Resman* nor *Walls*, taken alone or in combination, teach or suggest each and every element recited by Applicant's claims.

Claim 30 recites a system including, for example:

allocating to a first process, without accessing an operating system, a first block of a memory that has a size designated by a user; and
allocating to a second process, without accessing an operating system, a second block of the memory that has a size designated by the user while the first process is accessing the first block of memory.

(emphasis added). In *Resman*, "I/O control module 16 receives data from a host processor, converts it to a form suitable for storage and transmits it, via bus 18, to a

RAM 20” (col. 3, lines 6-8). Accordingly, *Resman* does not teach a user performing any designations. The only reference to a user in the context of memory is found in col. 1, lines 65-66, which states, “[a]s an example, a printer has available to it a set amount of RAM depending upon the amount installed by the user.” This statement merely shows a user may install a certain amount of RAM, but does not suggest “allocating to a first process, without accessing an operating system, a first block of a memory that has a size designated by a user,” as recited in claim 30.

Resman discloses a memory allocation system that allows applications to request and receive RAM space from a free RAM pool. If no space is available, an application is allowed access to an A/I/O RAM pool (col. 3, lines 29-49). I/O tasks are allocated space in an I/O fixed buffer pool. An I/O task may be allocated space in the A/I/O RAM pool only when a certain amount of space is available in the free RAM pool (col. 3, lines 50-62). Thus, contrary to the Examiner’s assertions, *Resman* does not teach or suggest “allocating to a first process, without accessing an operating system, a first block of a memory that has a size designated by a user.”

Resman does not state that the size of any portion of the RAM pools is designated by a user. On the contrary, *Resman* states that requests for RAM allocation are caused by an application running in CPU 14 (col. 3, lines 29-30). This software-based allocation process does not provide for user input, much less input to designate a size of a block of memory to be allocated to a process. Further, the mere fact that *Resman* allows an I/O task to access memory (under certain conditions) does not bolster the Examiner’s position. As explained, *Resman* does not mention or

disclose a user-designated size of block of memory that is allocated without accessing an operating system to a first or second process.

The Examiner states that *Resman* “discloses the user who carried out all the allocation/preallocation” (Office Action at page 6). In *Resman*, “[p]reallocation of RAM to various procedures that are to execute within a data processing system requires that the user make assumptions on how the RAM is to be utilized by each procedure” (col. 1, lines 42-45). A user assumption on how RAM is to be utilized does not constitute a teaching or suggestion of “memory that has a size designated by a user.” There is no teaching, in *Resman*, that the user designates the size. An assumption of RAM utilization does not require a designation of memory size, and *Resman* does not teach or suggest user designation.

Therefore, *Resman* does not teach or suggest “allocating to a first process, without accessing an operating system, a first block of a memory that has a size designated by a user” and “allocating to a second process, without accessing an operating system, a second block of the memory that has a size designated by the user while the first process is accessing the first block of memory,” as recited in claim 30.

The Examiner correctly notes that *Resman* does not teach “serialized operation by allowing a first thread to access a first designated block of the memory while another thread requests and secures access to another block of the memory” (Office Action at page 4). However, the Examiner relies on *Walls* to teach this limitation.

Even if the Examiner’s reliance is appropriate, *Walls* does not cure the deficiencies of *Resman*. That is, *Walls* fails to teach or suggest “allocating to a first process, without accessing an operating system, a first block of a memory that has a

size designated by a user” and “allocating to a second process, without accessing an operating system, a second block of the memory that has a size designated by the user while the first process is accessing the first block of memory,” as recited in claim 30.

Walls discloses that by “allocating pool memory quickly, the consumer will more quickly release serialized access to the pool structures and so reduce the delay to other potential customers” (col. 4, lines 64-67). Therefore, if pool memory is allocated to a first user, any access to that memory by a second user will result is an access delay until the first user releases access to the memory.

The Examiner states that *Walls* discloses allocation blocks “selected and allocated by the consumers” (Office Action at page 7). Applicant respectfully disagrees. In *Walls*, a consumer requests memory allocation from a pool of memory (col. 2, line 38 - col. 3, line 7). If memory is available, it is allocated to the consumer. The consumer does not select a memory block or designate a size of the memory block. Rather, “the operating system declares management ownership of the resources and then delivers to consumers only the portion of those total resources required to complete a particular task” (col. 1, lines 18-21). Therefore, the operating system, not the consumer, allocates resources.

The Examiner cites col. 2, lines 55-57 to teach consumer allocation and selection. This is not correct. This passage discloses, “blocks depicted by labels 24, 25, 26, 27, 28, and 29 are the portions of pool that have been allocated by consumers.” The operating system allocates these blocks to the consumer’s processes. The operating system determines if a block can be allocated (i.e. not locked by a consumer), and allocates the block to the consumer process. *Walls* does not contemplate user

designation of memory block size. Therefore, *Walls* thus does not teach or suggest "allocating to a first process, without accessing an operating system, a first block of a memory that has a size designated by a user" and "allocating to a second process, without accessing an operating system, a second block of the memory that has a size designated by the user while the first process is accessing the first block of memory," as recited in claim 30.

Accordingly, *Resman* and *Walls* fail to establish a *prima facie* case of obviousness with respect to claim 30, at least because the references fail to teach each and every element of the claim. Claims 32-34 depend from claim 30 and are thus also allowable for at least the same reasons as claim 30. The rejections under 35 U.S.C. § 103(a) are improper and should be withdrawn.

III. Conclusion

In view of the foregoing remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.



Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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